

NASA's rover spots Martian streaker

Scientists believe
image is of Viking 2
launched in 1975

BY MARY VALLIS

Spirit, one of NASA's Mars rovers, has sent a photograph back to Earth that shows an unidentified flying object above the red planet.

The rover snapped the image, which shows a pronounced streak across the Martian sky, while taking pictures of Earth, said Steven Squyres, the chief scientific investigator for the mission.

The rover's cameras are rarely pointed at the sky. It usually transmits close-ups of the Martian surface and panoramic shots of the planet's landscape.

"We were incredibly lucky," Dr. Squyres said in an interview yesterday. "We were pointed at the Earth, but we caught a spacecraft in the frame, too. It's kind of a remarkable thing."

Astronomers are still debating what caused the streak, but Dr. Squyres has a solid theory. Based on the streak's length and orientation, he suspects Spirit caught an image of Viking 2, one of seven out-of-commission spacecraft still orbiting Mars. NASA launched Viking 2 in 1975 and it went out of service in 1978.

NASA says the streak was the brightest object in the sky when the photograph was taken last week. Spirit took the picture with the green filter of its panoramic

camera and a 15-second exposure.

The streak covers about four degrees along a north-south arc, which would match Viking 2's polar orbit.

But there are other possibilities. The streak could have been another spacecraft or a meteor, but Dr. Squyres is less convinced of those options.

"It doesn't really look like that to me," he said. "A meteor streak tends to be faint at both ends, and this one's not. It starts abruptly at one end and ends abruptly at the other, as if it were something moving slowly across the sky."

Calculations show the object was moving at the right velocity to be a spacecraft in orbit, he added.

Tom Bolton, an astronomer at the University of Toronto, said he would be "very surprised" if the streak was caused by anything but Viking 2. Meteors rarely move north to south, he said. "It does happen, but it would be unusual unless it was a meteor shower."

The photograph will likely become fodder for conspiracy theorists anxious to find proof of alien life, said Phil Plait, an astronomer at California's Sonoma State University.

"There's always a very small segment of the population who disbelieves everything they hear from a government source," said Dr. Plait, who runs a Web site debunking astronomy myths.

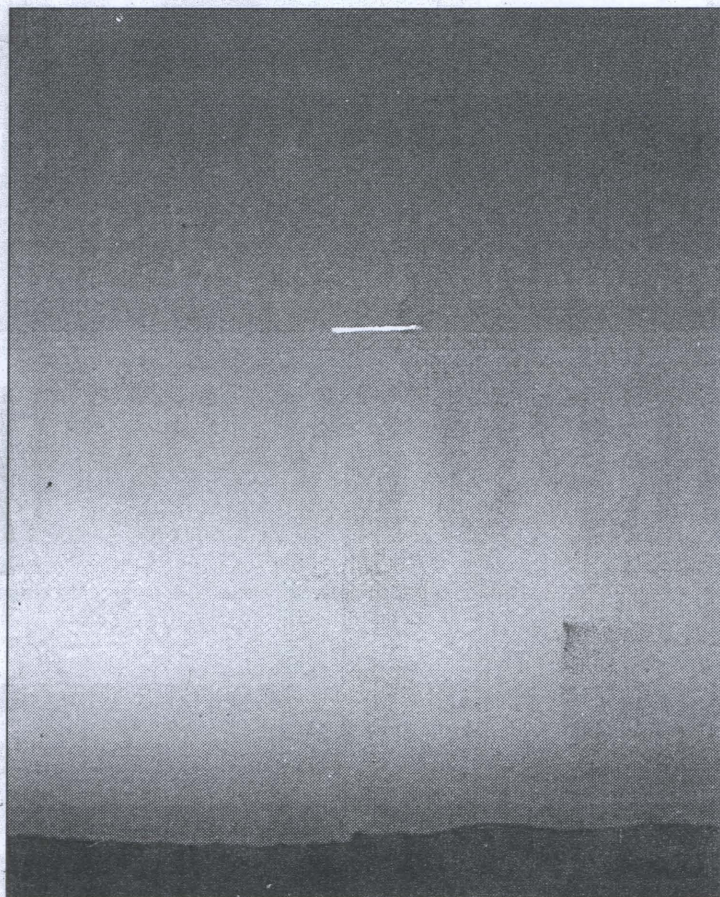
"If NASA were trying to cover this stuff up, then why would they be releasing the pictures at all? They are, and that indicates there's nothing to hide."

NASA sent two rovers — Spirit and its twin, Opportunity, — to Mars on a US\$820-million mission to research the planet, which has an esteemed position in alien folklore. This week, Spirit has been analyzing a drift of wind-blown material nicknamed "Serpent." On the other side of the planet, Opportunity is examining soil samples.

National Post

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NATIONAL POST, FRIDAY, MARCH 19, 2004



NASA / JPL / CORNELL

NASA's Mars rover Spirit came across a surprising unidentified flying object while observing the sky with one of its cameras.

The Toronto Sun • Friday, April 16 • 2004

Moon puzzle

PICTURES OF the newly discovered planetoid Sedna show it moonless, spinning alone some 13 billion km from Earth.

Sedna, though, still might have a moon that was hiding somewhere or is too dark to be photographed by the Hubble Space Telescope, said Sedna's discoverer, astronomer Mike Brown, of the California Institute of Technology. Given the planetoid's slow rotation, the seeming lack of a moon surprises Brown, "I still am convinced there is one there, and it's just darker than we expected and we haven't seen it yet," he said.

At 1,300 to 1,600 km in diameter, Sedna is too small to qualify as a planet. It's about three quarters the size of Pluto, its closest neighbour. —AP

Searchers find no sign of Lagos plane crash, call it UFO

LAGOS • The search for a light aircraft that crashed into the sea off Lagos last week has been abandoned after rescue workers found no trace of the plane or its occupants, officials said yesterday.

The alarm was raised after several people told authorities they had seen a commercial aircraft capable of carrying 25 people ditch in the sea off Lekki beach, east of Lagos, Nigeria's commercial capital.

Local rescue workers and South Africa-based Critical Rescue International were called in, but they searched in vain for wreckage.

"We are tired of looking at water. We are now convinced that there was no plane crash," said Emmanuel Ijewere, president of the Nigerian Red Cross.

The Nigerian Aviation Ministry said it still had no lead on the reported crash. Air traffic controllers had no knowledge of the plane.

The country's aviation watchdog, the Nigeria Aviation Safety Initiative (NASI), said on Sunday the crashed object had been classified as an Unidentified Flying Object.

Captain Jerry Agbeyegbe, executive director of NASI, urged the government to intensify the search

with more sophisticated equipment to determine the veracity of the witnesses' claims. "Certainly, an object was sighted crashing into the ocean. We have termed it for now as a UFO," he said. "We have advised government to intensify [the] search until we are absolutely sure that it was not a plane."

Industry experts blamed the mystery over the aircraft on the deplorable state of aviation facilities at Lagos airport. Air safety has been a source of worry ever since the government deregulated the airline industry in the mid-1980s.

Reuters

First stars after big bang found

Astronomers at the Space Telescope Science Institute unveiled the deepest portrait of the visible universe ever achieved in this image released yesterday taken by the Hubble telescope. The image captured after the million-second-long exposure reveals the first galaxies to emerge from the so-called "dark ages," the time shortly after the big bang when the first stars reheated the cold, dark universe.

24 HOURS - MAR. 10, 2004

The Toronto Sun, Wednesday March 3, 2004

10-year voyage to comet

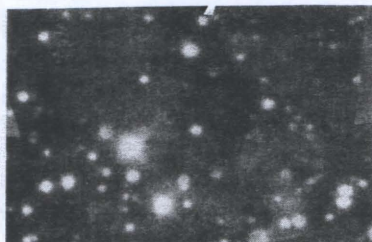
DARMSTADT, Germany (AP) — A European spacecraft yesterday began a 10-year journey to land on an icy comet in search of answers about the birth of the solar system and the origins of life on Earth.

The Rosetta craft blasted into orbit from Kourou, French Guiana, aboard an Ariane-5 rocket at 4:17 a.m. local time.

After pushing through Earth's gravitational field, European Space Agency controllers in Darmstadt, Germany took command of the three-tonne craft — named for the Rosetta Stone, whose inscriptions provided the key to Egyptian hieroglyphs.

Rosetta's 2014 destination is a comet called 67P/Churyumov-Gerasimenko, an irregular chunk of ice, frozen gases and dust discovered in 1969 by Soviet astronomers.

Scientists find comets interesting because they are considered to be much as they were when the solar system first took shape — unlike the planets, which have undergone vast changes. But no one has been able to drill into a comet to see what it is made of. Rosetta's lander will attempt to do just that.



Two new elements

Russian scientists say they've created two new chemical elements, but it's too soon to say they'll be added to the periodic tables of high school chemistry textbooks.

The elements represent unusual forms of matter with properties that go well beyond those of the 92 elements that occur naturally on Earth. Super-heavy elements may be abundantly generated by supernova explosions in stars.

Or perhaps they were fused during the fiery moments that signaled the dawn of the universe.

The discoveries will not be fully accepted and added to textbooks until other labs create the elements, a process that could take months or even years.

The Russian scientists hope other labs will repeat the experiment and take the research further.

- The Associated Press

NATIONAL POST, FRIDAY, APRIL 16, 2004

Cosmic magnifying glass finds distant planet

MICROLENSING TECHNIQUE

BY DEBORAH ZABARENKO

WASHINGTON • Astronomers used a sort of cosmic magnifying glass to find a hidden planet in the heart of the Milky Way, the first time this method has been used to detect a planetary system.

The technique — known as gravitational microlensing — holds the promise of turning up more planets that are orbiting stars besides our sun, and could be used by amateur astronomers to help confirm future discoveries, scientists said.

In this case, researchers found a planet more massive than Jupiter orbiting a star about 17,000 light-years away in the constellation Sagittarius. A light-year is about six trillion miles (10-trillion km), the distance light travels in a year.

The planet's gravity, coupled with the gravity of the star it orbits, acted as a giant magnifying glass in space, bending the light from an even more distant star some 24,000 light-years away and making it shine brighter for a

few days.

Astronomers have previously used this method to detect unseen cosmic phenomena they cannot directly observe, but this latest discovery could open a new way to identify distant planets — even relatively small planets like Earth.

So far, more than 100 extrasolar planets have been identified but most of these are large, Jupiter-sized planets whose presence is inferred by the way their considerable gravity makes their parent stars wobble in space.

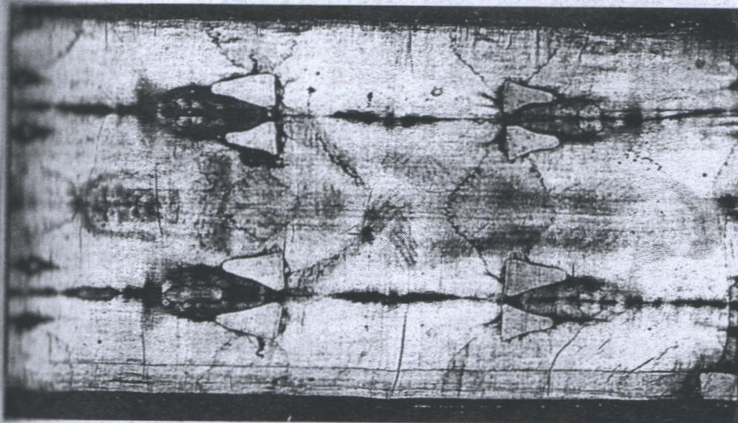
"The discovery of a Jupiter-mass planet in orbit around a star which is not all that different from the sun ... is really an important step for us in the search for extrasolar planets," said Philippe Crane, a NASA scientist.

The problem is that the stars and planets have to line up exactly for the gravitational lens effect to work, according to Bohdan Paczynski of Princeton University, who first proposed using microlensing in the search for extrasolar planets in 1991.

"Onestar in 100 million is subject to such a phenomenon," Mr. Paczynski said. "The main difficulty is to identify the right star at the right time, because it doesn't last very long — in this case a few days."

The advantage of the microlensing technique is that the reaction is easy to spot and does not require very sensitive equipment, he said. Once scientists identify a possible extrasolar planet, amateurs can add their own observations to help confirm the find.

Reuters



—SUN files

■ **THE IMAGE** on the shroud of Turin has been the subject of heated religious debate for more than 600 years.

Turin shroud two-faced

Italian scientists have found a matching image of a man's face and possibly his hands on the back of the Turin shroud, believed by many to be the burial cloth of Jesus Christ, one of the researchers said yesterday.

The discovery that the ghostly image on the back of

the linen cloth matches the face that adorns the front is likely to reignite debate over whether the shroud is genuine or a skilful medieval fraud.

"The fact that the image is two-sided • makes any forgery difficult," said Prof. Giulio Fanti of the University of Padua, adding that the discovery would support those who maintain the cloth is genuine.

Asteroid will make closest pass to Earth

A space rock will pass closer to Earth than any other recorded asteroid ever has, but there's no chance it will endanger our planet, astronomers said yesterday.

The small asteroid, discovered Monday by the NASA-funded LINEAR survey, will get within 26,500 miles of Earth at 5:08 p.m. EST today, the scientists said.

It will come so close that Earth's gravity will bend its path by about 15 degrees. Known as 2004FH, the asteroid will cross from one side of the moon's orbit to the other in 31 hours.

With a diameter of about 100 feet, this asteroid is not unusual; scientists at NASA's Near Earth Object Program said that these kinds of objects pass undetected at about this distance roughly once every two years.

This asteroid's closest approach to Earth will be over the Southern Atlantic Ocean. It will be bright enough to be seen with a good pair of binoculars from parts of Europe, Asia and most of the southern hemisphere.

More information is available at: <http://neo.jpl.nasa.gov>.

Martin's jet has brush with UFO

OTTAWA (CP) — Paul Martin had a high-flying close encounter with an UFO earlier this month, according to a report filed by the prime minister's pilot.

Martin and his entourage were cruising above Alberta on March 21 when their Challenger jet came within an otherworldly whisker of a luminous object streaking through the night sky.

In a report to Edmonton air traffic controllers, the pilot of Martin's plane noted seeing a "very bright light falling" through the air, with smoke trailing, while the plane passed over Suffield.

Celestial chunk

People on at least two other planes also saw the plummeting object, which was travelling "at a very fast rate of speed" from a high altitude, the report says.

A copy of the one-page form was provided to Canadian Press by Chris Rutkowski of Ufology Research of Manitoba. He obtained the report from the federal transport department.

What Martin's plane and many others saw that night was almost certainly a chunk of a comet or an asteroid that entered Earth's atmosphere and burned up into fragments.

Justin Kingsley, a spokesman for the prime minister's office, could not shed light on the question of whether Martin was aware of the celestial sighting.

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metro THURSDAY, APRIL 8, 2004

Astronomers map stars in Milky Way

An international team of astronomers has mapped the movement of stars in the Milky Way, in a scientific breakthrough that could improve understanding of our galaxy.

The results of the study by the Danish, Swiss and Swedish team, are the culmination of 15 years of work including more than 1,000 nights of observing more than 14,000 stars.

Birgitta Nordstrom of Denmark's Niels Bohr Institute, the leader of the research team, said the data showed the history of stellar movement in the Milky Way and will enable scientists to look into the future of our universe.

"We now know where the stars came from and we can also predict where they'll go," Nordstrom told Reuters.

The research, which is

published in the journal *Astronomy and Astrophysics*, shows the Milky Way galaxy had been much more turbulent and chaotic than scientists had assumed.

"For the first time, the changing dynamics of the Milky Way since its birth can now be studied in detail and with a stellar sample sufficiently large to allow a sound analysis," the European Southern Observatory, an intergovernmental European organization for astronomical research, said.

The Milky Way galaxy, which holds billions of stars and is home to our solar system, also houses stars traveling more than 186.4 miles per second. Stars traveling at such extreme speeds would be an area of further research the team would look into, according to Nordstrom.

Reuters

THE GLOBE AND MAIL
FRIDAY, OCTOBER 31, 2003

Is that a ghost?

Ghosts don't realize that they've died, contends Leslie Rule, author of *Coast to Coast Ghosts: True Stories of Hauntings Across America*. They can appear everywhere, she adds, and you might not realize you've seen one. "They can appear so real and solid. One way to tell is if they're wearing out-of-date or out-of-season clothes. At the Alamo, there is a ghost that can be seen that is wearing a black rain coat that is dripping wet even on sunny days."

SCIENTISTS SEEK LIFE IN GOLDILOCKS REGION

105 PLANETARY SYSTEMS

BY DAVID DERBYSHIRE

One in 20 stars could be orbited by Earth-like planets capable of supporting alien life, according to a new British study.

Astronomers have shown that rocky planets lying in a habitable zone where temperatures are suitable for life are more common than previously thought.

Within 10 years, telescopes should be powerful enough to detect these planets directly and reveal whether their atmospheres contain traces of life, they say.

Since the mid-1990s, astronomers have discovered 105 planetary systems. These planets cannot be seen with telescopes, but they can be indirectly detected. If planets are big enough and close enough to a star, their gravitational pull causes the star to wobble slightly — a motion that can be detected from Earth.

Since the first "extrasolar" planetary system was detected in the mid-1990s, scientists have been eager to see if they harbour life. For life as we know it to exist, a planet would need to lie within a region known as the Goldilocks — where temperatures are not too hot or too cold.

Professor Barrie Jones, of the Open University, told the Royal

Astronomical Society's conference in Milton Keynes: "All we have discovered so far are Jupiter-type planets, which are not likely to harbour life. But we expect there to be smaller rocky worlds within the habitable zone where the water would be liquid."

His team created computer models of nine of the known solar systems. Prof. Jones launched virtual rocky planets with masses between one-tenth and 10 times the size of the Earth into the models. The team launched the planets into different parts of the Goldilocks — with each orbit taking four or five days to process.

In some systems, the habitable planets were ejected from their orbit by the gravitational tug of the giant planets. But in about half, there were either safe zones within the Goldilocks, or the entire zone was safe.

"We had to run the models for one billion years to ensure the Earth-like planet's orbit was stable. In one model, the Earth was ejected after 100 million years because of a freak alignment of the planets," he said.

After making detailed studies of the five solar systems, Prof. Jones and colleagues came up with rules for evaluating the other 96 planetary systems. They found that Earth-like planets were possible in about half of them. The models show life could develop in about two-thirds of the systems.

"We now think that at least 10% of stars in the Earth's backyard have planetary systems," he said. "If only half of these are able to sustain a rocky planet in the habitable zone, it means that one in 20 could harbour life."

The European Space Agency and NASA are planning orbiting telescopes that would detect oxygen and carbon dioxide around planets. They are also investigating whether Earth-sized moons orbiting gas giants could support life.

The Daily Telegraph

FINANCIAL POST, SATURDAY, AUGUST 23, 2003

Russian scientists help build latest European spacecraft

ZHUKOVSKY, RUSSIA • Russian scientists are participating in the construction of the European Space Agency's new spacecraft set for blast off next year, an ESA director said yesterday. The new Automated Transfer Vehicle is intended to bring supplies to the International Space Agency in September, 2004. "Russian and European specialists are working on the project," said Patrice Amadieu, deputy director of the ATV project, speaking at the MAKS-2003 aviation and space salon near Moscow. Some of the equipment is designed by Russian space construction company RKK Energia. The cost of the project is €750-million. *Agence France-Presse*

The Universe

TERENCE DICKINSON

★ **Most remote galaxy:** Einstein's 1916 general theory of relativity predicted that a strong gravitational field bends space.

For example, a beam of starlight passing close to the sun would be bent by the sun's gravity.

Three years after Einstein published the theory, astronomers measured the positions of stars near the sun in photographs of a total solar eclipse.

The pictures showed that the images of stars appearing near the sun had been shifted out of position by exactly the amount predicted by the theory.

This "lensing" of light by gravity is now used by astronomers to peek at remote galaxies that otherwise would remain too faint to detect. The idea is to look near massive galaxy clusters for telltale signs of a galaxy warped by the cluster's gravity.

Like a magnifying glass, the lensing effect can brighten the galaxy and warp it at the same time.

Astronomers using the Hubble Space Telescope and the Keck telescope in Hawaii reported this month that searches near the massive galaxy cluster Abell 2188 had turned up the lensed image of a galaxy 13 billion light-years distant, the most remote galaxy ever recorded.

TORONTO STAR

SUNDAY, FEBRUARY 22, 2004

★ **Arcturus an outsider?** Astronomers have known since the 18th century that the bright star Arcturus, 37 light-years away, is moving through space at the torrid pace of 120 kilometres per second.

Moreover, it is moving in a different direction through our galaxy, compared with the sun and other nearby stars. But astronomy textbooks have always said Arcturus must be from some part of our galaxy, the Milky Way.

Now, a team of three astronomers — Julio Navarro (University of Victoria), Amina Helmi (University of Groningen, the Netherlands) and Kenneth Freeman (Mt. Stromlo Observatory, Australia) — propose that Arcturus and more than 50 other stars with similar speed and direction through the Milky Way are actually from a satellite galaxy that once orbited ours and crashed into it about 5 billion years ago, dispersing its stars on seemingly bizarre paths through our neighbourhood.

Initially, other astronomers are approving of the new theory that identifies Arcturus as one of those stars.

Terence Dickinson is editor of Skynews magazine and author of books for backyard astronomers.

metro JANUARY 8, 2004

Sun's twin discovered

The sun has a twin in the left claw of Scorpio.

The solar twin is 18 Scorpii, located in the constellation Scorpio (The Scorpion), a mere 46 light-years from Earth. A light-year is about 9.5 trillion kilometres, the distance light travels in a year. In cosmic terms, this is quite close.

Astronomers have looked for sun-like stars for years, because they may have orbiting planets like Earth, and might be good places to search for signs of life.

They first thought the star was the sun's twin in 1997.

Reuters

FRIDAY, FEBRUARY 27, 2004

Berry believes in ghosts

Halle Berry says she firmly believes in ghosts and has sensed the presence of one before, Ananova.com reports.

The actress, who is in Berlin promoting her new film *Gothika*, told German magazine *Bunte* she believes the dead come back to haunt the living.

"I absolutely believe in ghosts. I'm convinced the souls of the dead can come back to take care of things that were unresolved when they died," said Berry.

The star went on to say she has encountered a ghost before: "I've never seen one, but I've felt the presence of a ghost near me. At least I'd like to believe that."

Secret bottled away

THIS PHOTO, released yesterday, shows a fake baby dragon encased in a 76-cm jar that was discovered in a garage in Oxfordshire, England. Paperwork found alongside the dragon was written in the old-fashioned German style of the 1890s. The documents suggest Britain's Natural History Museum turned the dragon away and sent it to be destroyed. But the jar was intercepted by the grandfather of the man who found it in his garage.

— Allistair Mitchell, Reuters



CAPT. PICARD SAYS MISSION TO MARS VIOLATES PRIME DIRECTIVE

HUMANS SHOULDN'T GO

LONDON • The captain of the USS Enterprise thinks people should stay on Earth instead of boldly going where no man has gone before.

Patrick Stewart, who played Captain Jean-Luc Picard in the TV series *Star Trek: The Next Generation*, said in an interview published yesterday that he thinks interplanetary travel for humans is a bad idea.

"I'm a bit of a wet blanket when it comes to the whole business of space travel," Stewart was quoted as saying on the British Broadcasting Corp.'s Web site.

"I would like to see us get this place right first before we have the arrogance to put significantly flawed civilizations out onto other planets — even though they may be utterly uninhabited," he said.

Stewart, 63, said he approved of unmanned missions such as NASA's use of twin rovers to explore the surface of Mars. But he objected to sending astronauts,

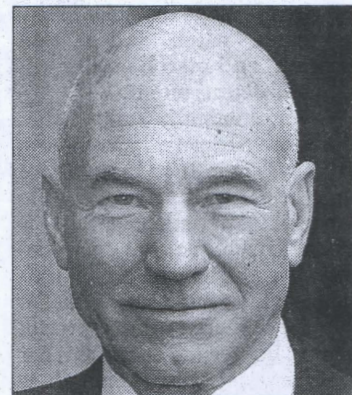
saying the trips were too expensive. "As I get older, my unease at the time and the money that has to be spent on projects putting human beings back to the moon, and onto another planet, is so enormous," Stewart said. "And it would take up so many resources, which I personally feel should be directed at our own planet."

U.S. President George W. Bush's new budget proposes an ambitious program to return Americans to the moon as early as 2015, and eventually to send a mission to Mars.

However, the budget only contains US\$1-billion in new money for the effort over the next five years, with another US\$11-billion reallocated from current NASA programs.

The BBC said Stewart made the comments in an interview with its World Service radio broadcast.

The Associated Press



JOHN STILLWELL / AGENCE FRANCE-PRESSE

Patrick Stewart: "wet blanket."

metro

WEDNESDAY, FEBRUARY 4, 2004

Man on Mars in 30 years?

A European could step on the surface of Mars within three decades, according to European Space Agency plans spelled out yesterday.

The plans are more precise than the broad U.S. goals of sending a man back to the moon by 2020 and to Mars by 2030, revealed last month by U.S. President George W. Bush.

"We think it is technically feasible to have a manned mission to the moon between 2020 and 2025 and then to Mars between 2030 and 2035," said Franco Onigaro, project manager of the ESA's fledgling Aurora space exploration program.

metro

JANUARY 29, 2004

New form of matter created

Scientists at the University of Colorado said yesterday they had created a new form of matter from a cloud of supercooled potassium atoms.

They predicted it could help lead to the next generation of superconductors for use in electricity generation, more efficient trains and countless other applications.

The new matter form is called a fermionic condensate, and it brings science one step closer to an everyday, usable superconductor — a material that conducts electricity without losing any of its energy.

metro

JANUARY 8, 2004

Galaxies grow fast

Like parents of a precocious child, astronomers expressed amazement yesterday about the universe's development. It turns out the cosmos is growing up much faster than scientists ever expected.

The tell-tale sign of the early maturation of the universe is a giant string of galaxies that clumped together in a coherent structure just 2.8 billion years after the theoretical Big

Bang explosion that astronomers believe created the universe.

This kind of articulate clumping was not expected until the universe was about half its current age of 13.7 billion years, said Bruce Woodgate of NASA's Goddard Space Flight Center.

Astronomers figured such structures could form as late as 6 billion years ago, when the universe was some 7.7 years old. Sophisticated, orderly structures would require extra billions of years to get together, theorists believed. But yesterday's findings show these structures formed billions of years earlier.

Virgin Mary portrait cries tears of oil for Montreal apartment manager

A Virgin Mary who cries tears of oil is on display at an apartment complex in the Montreal borough of St. Laurent. The icon-like portrait of Mary, right, discovered by apartment manager Abderezak Mehdi, has been drawing a steady stream of believers since the oil drops were noticed about 10 days ago. Mr. Mehdi, a Muslim, says he cannot explain why Mary's picture is leaking oil for him. (The tears stop when someone else handles the portrait.) The small portrait sits above a white dish holding a small amount of yellow liquid that Mr. Mehdi says is like pure olive oil. "We don't accept donations," he insisted. One sobbing woman, who knelt before the improvised shrine, begged Mr. Mehdi for a blessing. "I'm not a priest," he protested, before dipping his fingers in the oil and anointing the woman's forehead. "There can be miracles, but you have to believe in yourself."

Ann Carroll, CanWest News Service (The Gazette)



**MODERN -
DAY
MIRACLE?**

NATIONAL POST, WEDNESDAY, FEBRUARY 25, 2004

Astronomers nearly issued alert about possible strike by giant asteroid, BBC says

Astronomers came within minutes of alerting the world to a potential asteroid strike last month, The British Broadcasting Corp. reports. They believed a 30-metre asteroid had a 25% chance of hitting Earth within 36 hours and contemplated a call to U.S. President George Bush, who was about to make a major speech on U.S. space plans. If they had called, the BBC said, he could have had something very different to say. He could have begun by warning the world it was about to be hit by a space rock. Potentially, the loss of life could have been much worse than the Sept. 11 attacks. Mr. Bush would not have known where it would hit — only somewhere in the northern hemisphere. Experts would have been bouncing radar signals off the huge rock as he spoke to get more information about its trajectory. But new data finally showed there was no danger. *National Post*

The Saturday Sun, February 21, 2004

Souls lost in space

TAIPEI, Taiwan (AP) — There isn't much room for cemeteries in densely populated Taiwan, so a U.S. firm is offering an alternative: Shooting people's ashes into space.

Houston-based Celestis Inc. announced it has signed a deal with one of Taiwan's biggest funeral homes, Baushan Enterprise, to provide "space burials."

Ashes are packed into an aluminum tube the size of a lipstick container. The tube orbits Earth every 90 minutes before re-entering the atmosphere and burning up. It costs about \$16,000.

NATIONAL POST, WEDNESDAY, JANUARY 21, 2004

ALIEN VISITORS

Research reveals some stars in the Milky Way may be intergalactic captives

Some of the stars in the Milky Way are likely alien stars from other galaxies, according to new research by University of Victoria astrophysicist Dr. Julio Navarro. He argues that the star Arcturus — the third brightest star in the night sky — is from a different, smaller galaxy that was absorbed about 10 billion years ago by our Milky Way galaxy. Dr. Navarro and colleagues from the Netherlands and Australia have published their conclusions this week in *The Astrophysical Journal Letters*. This notion of intergalactic cannibalism calls into question the traditional theory of galaxy formation. "It may be that the formation of all galaxies include events in which smaller galaxies are swallowed by the gravitational pull of their larger companions," Dr. Navarro said. *CanWest News Service*

The Toronto Sun, Thursday February 12, 2004

Demons at fault for fires?

ROME (Reuters) — A Sicilian town is struggling to find out why dozens of household items from freezers to furniture keep mysteriously bursting into flame, terrifying locals and sparking theories of demonic intervention.

Since mid-January, dozens of electrical goods and pieces of fur-

niture have spontaneously gone up in flames in Canneto di Caronia.

'Can't explain it'

"I've seen unplugged electrical cables burst into flames ... but I just can't explain it," a policeman said.

Some fires have engulfed homes. Italian utility Enel tried cutting

power to the town after the first reports but the fires continued, causing huge damage. Theories ranged from arson to a freak power surge or even the supernatural.

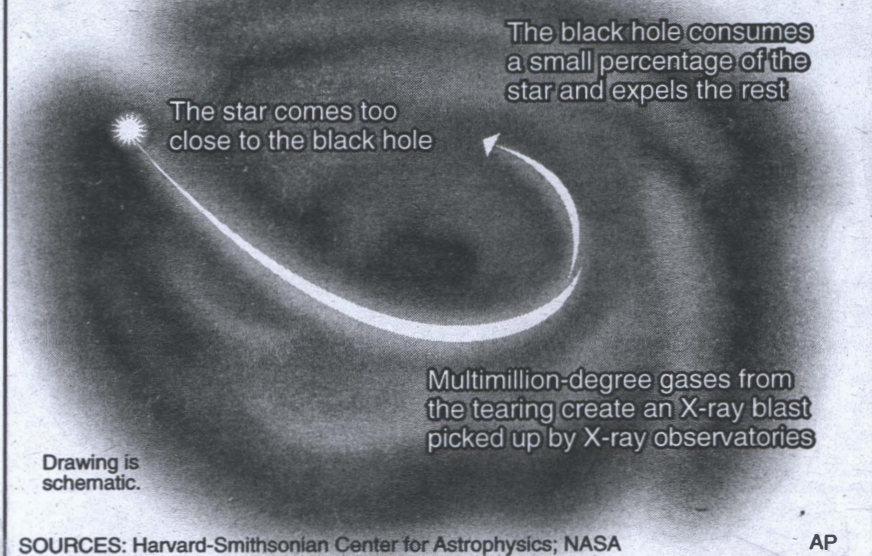
"I've seen ... this before," Catholic exorcist Gabriele Amorth said. "Demons occupy a house and appear in electrical goods."

STAR TORN APART BY BLACK HOLE

TUESDAY, JANUARY 27, 2004

Stretched to the breaking point

Two observatories have proof of a star being stretched apart by a black hole. The star — about the size of our sun — probably came too close to another star, throwing it into the path of a black hole 100 million times its mass.



SOURCES: Harvard-Smithsonian Center for Astrophysics; NASA

AP

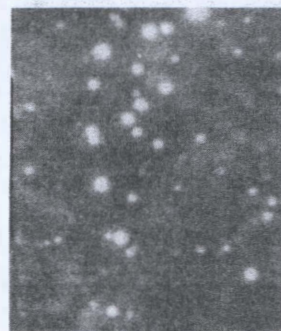
Scientists question theories about galaxy formation

Traditional ideas about galaxy formation have been challenged in a new paper co-authored by a Canadian researcher.

The scientists argue that Arcturus, the fourth brightest star in our sky, is originally from a small galaxy swallowed up about 10 billion years ago by the Milky Way.

The star is one of several in the galaxy that follow paths noticeably different than others, such as the sun, which move in a roughly circular orbit around the centre of the galaxy, said Julio Navarro of the University of Victoria.

The new finding challenges the traditional theory of galaxy formation, which says that they develop in isolation following the collapse of a giant cloud of gas and dust.



Oldest galaxy clusters found

Astronomers have captured images of the oldest, most distant galactic clusters ever seen. The discovery shows immense numbers of stars formed less than two billion years after the birth of the cosmos.

The finding, to be presented this week at a meeting of the American Astronomical Society, suggests that the raw materials needed to create life may have formed earlier than astronomers once believed.

Dying gasp of X-rays detected

LOS ANGELES (AP) — Astronomers reported yesterday the first strong evidence of a super-massive black hole stretching, tearing apart and partially gobbling up a star.

The event had long been predicted by theory but never confirmed.

"This is really fantastic stuff. This is one of the Holy Grails of astronomy," said astronomer Alex Filippenko of the University of California at Berkeley.

A powerful X-ray blast drew the attention of astronomers to the event, located near the centre of an otherwise inconspicuous galaxy called RX J1242-11. The galaxy is about 700 million light-years from Earth.

The international team of astronomers believes the blast was produced as debris from the destroyed star was sucked into the black hole.

"The last cry of help before the matter falls into the black hole is radiated in X-rays, which we have detected," said Gunther Hasinger, of the Max Planck Institute for Extraterrestrial Physics in Germany.

The resulting flare was thousands of times brighter than all of the billions of other stars in the galaxy, astronomers said at a NASA news conference.

Veered off course

A black hole is a massive but unseen celestial object that has such an intense gravitational pull that nothing — not even light — can escape from it.

This particularly black hole is estimated to have a mass 100 million times that of the sun.

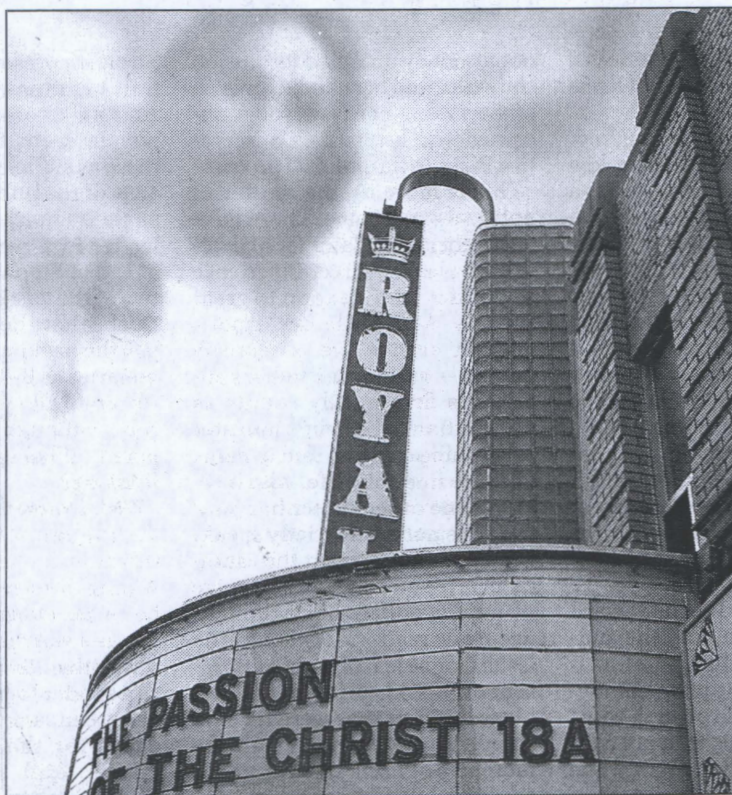
Astronomers said an unlucky star about the size of our sun neared the black hole after veering off course following a close encounter with another star.

The tremendous gravity of the black hole stretched the star, ripping it apart in perhaps just hours or days. The star came apart at a distance from the black hole comparable to the 225 million km that separates our sun and Mars.

Astronomers used NASA's Chandra and the European Space Agency's XMM-Newton X-ray observatories to capture the event.

The Toronto Sun, Thursday February 19, 2004

Image of Jesus giving thumbs-down appears over Estevan theatre showing 'Passion of Christ'



SEAN CHUDLEIGH / NATIONAL POST



ED STRUZIK, EDMONTON JOURNAL, FILE

The Haughton Crater, formed 20 million years ago and more than 20 kilometres in diameter, bears similarities to the surface of Mars.

RENATA D'ALIESIO
Edmonton Journal Staff Writer
DEVON ISLAND, NUNAVUT

This patch of the High Arctic polar desert is home to the Flashline Mars Arctic Research Station, built three years ago by the Mars Society, a space-lobby group.

Each summer, volunteer research teams have spent weeks living in the two-storey cylindrical station, simulating space missions to Mars. The missions, the Mars Society hopes, will become reality one day.

"It's really in a sense a key to humanity's future," says Robert Zubrin, president of the Colorado-based group, whose members include scientists from around the world.

"Will we become a spacefaring species? This question, in a sense, is going to be resolved on Mars. If we can't make it there, we can't make it anywhere."

For now, the group will settle for making it on Devon Island. The island is home to the Haughton Crater, formed 20 million years ago. The crater resembles impact craters on Mars, with similar valleys and ridges. The weather is comparable, as well. The air is dry, cold and extremely windy. A summer day's temperature is about what it would be on Mars: from -5 to 5 C.

NASA is carrying out its own research at the crater.

The Haughton-Mars Project wrapped up its seventh field season this past summer. The rocky polar desert, NASA believes, holds possible clues to the evo-

Mission to Mars

lution of Mars, particularly the planet's water and climate.

Of all the planets in Earth's solar system, Mars has always held the most allure.

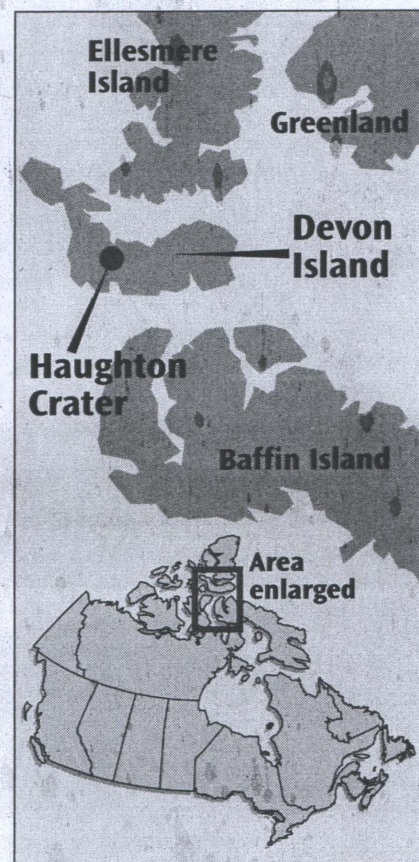
Early in September, amateur astronomers across Canada pointed their telescopes toward Earth's nearest planetary neighbour, which hadn't been that close in 60,000 years.

Samson Ootoowak dreams of the Red Planet, of flying in space one day, dreams he's had since he was a young boy growing up in Pond Inlet, Nunavut.

The 23-year-old spent three summers volunteering at the Mars Society's field station. The experience, he says, gave him direction.

"Meeting all those professors. The exposure to all that kind of stuff helped me figure out what I wanted," Ootoowak says. "Before my dreams were just dreams. After working there, they became possible."

"I'm always aware it's one of those things that's a long shot," he says of his chances of making it to space. "It's



something you work towards. You always got to push."

And that's what the Mars Society is about, pushing for space exploration, pushing for private dollars to finance research. The group has raised about \$1 million US for the research station on Devon Island. The waiting list of volunteers who want in on next summer's field season is huge, Zubrin says.

"Our ad says, 'Hard work. No pay. Eternal glory.'"

The glory was in question in 2000, when the station was being built. The destruction of a crane prompted the construction crew to walk out on the project. But Zubrin and other volunteers, including Inuit from the area, persevered.

"It showed me the human spirit can't be beat," he says. "Don't you think they are going to have to improvise (on Mars), like we did to build the field station? It's our ability to muddle through, be creative."

—Flashline Mars Arctic Research Station mission data: July 19, 2003
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EDMONTON JOURNAL

FRIDAY, NOVEMBER 7, 2003